

CALIFORNIA PUBLIC UTILITIES COMMISSION
Water Division

ADJUSTING AND ESTIMATING
OPERATING EXPENSES
OF WATER UTILITIES
(Exclusive of Taxes and Depreciation)

Standard Practice No. U-26

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MEMORANDUM

This standard guide has been prepared by members of the Results of Operation Section, Hydraulic Branch of the Commission's Utilities Division staff, under authorization of Work Order No. S-1699. Other engineers from the Commission's staff and elsewhere have rendered assistance through descriptions of their estimating techniques and by making available their work papers.

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CHAPTER 1

PURPOSE AND SCOPE

A - PURPOSE OF THIS GUIDE

1. This guide for adjusting and estimating operating expenses¹ of water utilities, covers certain methods and the principles involved. This guide primarily is intended as an aid for engineers who have had limited actual experience in determination of water utility operating expenses. Also, it should serve to promote uniformity of treatment and practicable thoroughness in the development of staff expense estimates.
2. The basic objective of making estimates of operating expenses is to develop required components for the expense and related portions of the staff's estimated summary of earnings. Dependable records, operational procedures, available reference data, together with logic in assumptions and reasonableness and accuracy of methods used and computations made, will give best results. Proper balance should be achieved between estimating expenses and evaluating the overall quality of service provided by the utility.

B - SCOPE OF THIS GUIDE

3. This guide covers the assembly of data, sequence of work, consideration of various normalizing adjustments, identification of trends and evaluation of such other factors as purchased power and water costs, with a view to final presentation of results in a formal hearing. In addition, it covers certain fundamental regulatory principles established by the California Public Utilities Commission and basic engineering economy considerations.

¹ Exclusive of taxes and depreciation.

C - OTHER RELATED STUDIES

4. Standard Practices U-2 and U-3-W, with attachments, are the basic guides for the preparation of results of operation reports related to water utility proceedings. A staff publication entitled "A Guide for Determining Reasonable Amounts of Expensed Payroll for Small Water Utilities" was issued on January 31, 1966, under Work Order No. H-93.

D - PRACTICAL APPLICATION

5. Frequently, because of the small size of a utility, the scarcity or inaccuracy of the basic data, the short term of utility operation, or availability of staff time, the detailed treatment described here is not possible or warranted. In actual practice, owing to the individual discretion of the engineer concerned, the method may vary from simple judgment for estimated amounts for each expense component to extensive and detailed computations. In any event, the basic principle and methods mentioned here should be of help in testing the reasonableness of the final results arrived at by any method or procedure.

6. Based upon Commission decisions and concepts of engineering economy, the following basic factors should be reflected in the estimates of expenses:

- a. Water system operation and construction for the near future (2-3 years) and the effects of such future plant operation and facilities.
- b. Trends of past experience with due weight given to present conditions and latest known wage and price levels.
- c. Unusual expenses and those including recent charges for deferred maintenance adjusted to reasonable average levels.
- d. Elimination of nonutility, and adjustment for nonrecurring items of expense.
- e. Judgment based upon fact, field observations and personal experience.

CHAPTER 2

BASIC DATA

A - GENERAL

1. The engineer to whom a rate increase application or other formal proceeding is assigned should acquaint himself with the utility and its history. Previous rate and certificate proceedings, formal complaints or investigations, and related decisions, together with the current application and exhibits, give a brief history and over-all picture of the utility. The present operations, however, may represent changes of recent origin; therefore, the detailed staff study is made only after receipt of the company's work papers and replies to data requests in the pending proceeding. An on-the-site field investigation will allow the engineer to better evaluate the data.

B - COMMISSION RECORDS

2. A study of Commission historical records should give an idea of the methods of the particular utility's operation and the problems likely to be encountered during the staff investigation. Some of the historical records available to the engineer are listed below:

- a. Formal files of previous rate or certificate proceedings, Commission investigations or formal complaint cases and the opinions and orders of the Commission.
- b. Transcripts of rate or certificate proceedings, Commission investigations or formal compliant cases.
- c. Annual reports filed with the Commission.

- d. Hydraulic Branch files.
 - (1) Latest staff results of operation or other investigation reports.
 - (2) Staff workpapers of formal or other proceedings (so-called "Hydraulic" files).
 - (3) Tariff files (current and superseded).
 - (4) Informal complaints filed with Customer Service Representative.
- e. Files of other Utilities Division Branches.
 - (1) Gas and Electric tariff files (current and superseded).
 - (2) Monthly operating reports filed by some utilities (General Engineering Branch, Statistics Unit).

3. All the above material can be taken to the engineer's desk for inspection and study. The Gas and Electric tariff files may be needed for power cost analysis if the utility is served by regulated gas or electric companies.

C - EXAMINATION OF RECORDS

4. The Finance and Accounts Division may be able to provide pertinent recorded information by separating Class A, B and C water utility operating expense accounts into material, labor and other functions, such as provided by the Uniform System of Accounts for Class D water utilities. The extent of the financial examiner's work should be ascertained as soon as possible, and the engineer should indicate any special accounting matters he would like the financial examiner to analyze.

5. It is important to obtain as soon as possible any accounting adjustments or corrections which the financial examiner may recommend. Normally, all his work will be completed before the test year's ratemaking expenses are estimated by the engineer. Occasional conferences between

the assigned financial examiner and the engineer are valuable in formulating guidelines of relevancy and materiality for necessary accounting data.

D - FIELD INVESTIGATION

6. A knowledge of the water system gained from prior review of Commission records will expedite the on-site inspection. An up-to-date system map should be obtained from the utility before the inspection. Any service problem areas may be ascertained through customer interviews, Commission records of informal complaints, and the engineer's own spot checks of pressure, taste, and odor, as well as by contacting the County and/or State Health Departments having jurisdiction over water quality.

7. A general knowledge of the duties of the utility employees should also be acquired during the field investigation, by direct interviews if necessary.

8. The engineer should study the utility's records concerning quality of service, such as well tests, pump tests, pressure tests, water quality analyses, customer complaints, and so on. In addition, accounting items may be further explored by the engineer during the field investigation if such need arises.

E - DATA REQUESTS

9. A written data request should produce any supplemental information needed by the engineer. Additional data may be required as the investigation proceeds and should be requested as needed. The engineer should not, however, ask for nonessential information, or for any information readily available in the Commission's files or derivable from the data already on hand. A typical data request for a smaller system is in Appendix A. The Master Data Request for a Class A system is in Appendix B.

CHAPTER 3

SEQUENCE OF WORK

A - PREPARATORY WORK

1. Before actually making expense estimates, the revenue study should be completed. From the revenue study, the customer growth and usage estimates and the water production and/or purchase requirements can be ascertained after giving consideration to unaccounted-for-water arising from leakage, fire protection or other unmetered usage in a fully metered system.
2. The expenses are generally separated, for analysis, by function or by accounting classification. The use of both methods provides a cross-check. Table 3-A is an example of separation of recorded expenses by function and by accounts.

B - ANALYSIS AND ESTIMATES

3. The following sequence can be followed:
 - a. Determine cost of purchased water.
 - b. Determine cost of purchased power and/or fuel.
 - c. Determine payroll expensed.
 - d. Make estimates for other functions' expenses.
 - e. Draft the report chapter.
 - f. Have all calculations checked.
4. It is often best to first determine the estimates for the basic year to be tested. Preceding or subsequent years' adjustments or estimates can be developed by making allowances for identified trends from the basic test year. It should be noted, however, that if all known current and near future labor, material and other price levels are reflected in the basic test years' expense estimates, the only remaining trend-inducing variables are customer growth (or decline) and increasing (or decreasing) use of water per customer.

CHAPTER 4

ADJUSTMENTS AND ESTIMATES

1. Adjustments and other considerations that are most likely to occur in estimating operating expenses are mentioned in this chapter.

A - PURCHASED WATER

2. Some of the items to be considered in estimating the cost of purchased water are:
 - a. Water quantities allocable between normal gravity flow and pumping.
 - b. Latest price levels, or firm future levels.
 - c. Taxes assignable to water purchased or produced.
 - d. Assessments through stock ownership in mutual or other water systems.

B - PURCHASED POWER

3. Some items to be considered in estimating the cost of purchased power are:
 - a. Existing pumping units should be checked for operating efficiency. An adjustment may be made for low efficiency, with an associated allowance for pump overhaul in the appropriate account.
 - b. The kWh (or other fuel unit) per Ccf pumped should be determined for each pumping unit as well as the energy cost per Ccf, for a period of several past years.
 - c. Allow for change in discharge head and pumping water level in wells.
 - d. Allow for new methods of operation of well and booster pumps.
 - e. Allow for necessary additional pumping units, considering minimum or standby power charges, as well as cost per Ccf or kWh.
 - f. Check for more advantageous power schedules.
 - g. Adjust for latest gas or electric rates (or other fuel costs).

C - PAYROLL

4. Besides the expensed payroll guide for small water utilities mentioned in Chapter 1, a comparison of payroll per customer with similar water utilities may be obtained in reports of comparative financial ratios issued annually by the Finance and Accounts Division. A tabulation of payroll adjustments normally considered is as follows:

- a. Adjust to latest wage and salary levels known for all employees.
- b. Determine if owners' or directors' salaries are reasonable, adjust if necessary.
- c. Allow for owners' time, if not charged, for a proprietorship utility.
- d. Adjust for adequate or reasonable number of employees.
- e. Allow for normal and expected overtime and part-time work.
- f. Adjust for recently adopted methods of operation.
- g. Normalize or eliminate payroll pertaining to any unusual work done, depending upon the circumstances.
- h. Capitalize construction work payroll if mingled with expenses, and coordinate with plant adjustment or estimate.
- i. Allow for appropriate growth in the utility's operations.

D - OTHER OPERATION AND MAINTENANCE EXPENSES

5. The following is a list of factors considered in adjusting and estimating operation and maintenance expenses other than payroll, power and purchased water:

- a. Adjust amount of chemicals used for normal year water production.
- b. Adjust cost of chemicals to latest price known.
- c. Eliminate nonrecurring expenses (or spread over a reasonable period of years) and eliminate nonutility expenses.

- d. Analyze accounts with unusual expenses relative to other years of the study.
- e. Adjust for possible deferred or delayed maintenance charges, in conjunction with possible related depreciation expense adjustment.
- f. Allow for reasonable use of private car necessary for operation of the small proprietorship utility business.
- g. Allow for possible effect of new vehicles in reducing maintenance costs.
- h. Adjust for latest billing method and costs.
- i. Adjust for latest postage rates.
- j. Include a reasonable rental allowance for facilities and structures which are not owned by the utility. Analyze the associated services, which may include utilities and maintenance of the facilities, to determine whether or not they are included in the rental cost. Also, refer to Subject Reference R91, dated January 9, 1964, concerning possible rate base treatment of rented facilities.
- k. Check if adequate records are kept and make an allowance for any additional accounting and record keeping if necessary.
- l. Capitalize costs of construction materials and components, if mingled with maintenance expenses and if life over one year.
- m. Uncollectibles should be based upon previous recorded amounts provided the utility has shown a conscientious effort to collect all past due bills.
- n. Allow for appropriate growth in the utility's operations.

E - ALTERNATE METHOD

6. An over-all check of expenses, excluding power, purchased water, and chemicals, can be made for those utilities which keep good recorded data and which are not rapidly changing because of large customer growth. In fact, this method may provide the best results for very large companies, provided some analysis is made of individual accounts. The following items should be observed:

- a. Use at least five years of recorded data.
- b. Separate operation expenses and maintenance expenses.
- c. Adjust payroll to present wage and salary levels and ascertain trends, if any.
- d. Adjust material and supplies prices to present levels and ascertain trends, if any. The use of an Engineering News Record index, the Handy Whitman index, or other appropriate indices may be helpful.
- e. Adjust for customer and/or usage growth.
 - (1) In the operation accounts, the meter reading and billing accounts generally increase directly with customer growth. Other operation accounts may increase at a rate of 50% to 60% of customer growth.
 - (2) In the maintenance accounts, additional meters, services, pumps, or footage of main, may or may not directly affect maintenance costs. The engineer will have to use his judgment and experience.
- f. Since maintenance is a fluctuating item, taking an average of past years, after appropriate adjusting, is most helpful. In the operation portion, the latest year, adjusted, is usually the most pertinent.

7. It should be noted that all adjusted and estimated operating expenses must be consistent with not only the water usage estimates

developed for revenue estimates but also with any utility plant estimates affecting maintenance or operation.

8. Other principles and practices relevant to adjusting and estimating operating expenses can be found in the staff's subject reference memoranda, particularly in the D-, L- and M- series.

F - ADMINISTRATIVE AND GENERAL EXPENSES

9. The General Engineering Branch should be consulted on any complex questions concerning administrative and general accounts. For the present, the following account items should be noted:

- a. Regulatory Commission expense is usually spread over five years, unless the frequency of utility rate or other proceedings is more or less often. In making estimates, the terminology "amortized" should be avoided.
- b. Dues, donations and contributions to charitable and service organizations are generally disallowed. Dues to recognized technical organizations are generally allowed.

10. In all rate increase applications involving the major water utilities and those having multi-district or affiliated operations intra or interstate, the administrative, general and miscellaneous expenses normally are adjusted and estimated in the General Engineering Branch, since allocation or separation procedures are usually involved between and among the utilities' districts and their common general office, billing office and possibly other joint operations.

CHAPTER 5

EXAMPLE OF OPERATING EXPENSES SECTION OF REPORT

A - OPERATING EXPENSES

1. The following tabulation is a summary of the 1967 recorded and applicant's and staff's estimated operating expenses for 1968, segregated by function.

2. An explanation of differences between estimates shown in the preceding tabulation is given in the following comments:

- a. Purchased Water - Applicant's and staff's estimates for this item were consistent with their respective methods for estimating purchased pumping power. Applicant and staff both estimated that purchased water would meet 50 percent of total requirements and that unaccounted for water would be five percent of total supplies.
- b. Purchased Pumping Power - Applicant predicated its increased power costs on the indicated trend between 1966 and 1967. The year 1966 was an exceptionally low water sales year and pumping power costs were correspondingly low. The staff correlated its estimates for power with the water sales determined for its revenue estimates.
- c. Total Expensed Payroll - The staff has included an increase in employees' salaries authorized by applicant's Board of Directors' resolution of November 22, 1967, subsequent to the preparation of applicant's estimates.
- d. Maintenance and Operating Materials and Supplies - The amounts expended during the recorded year 1967 totaled \$15,626 as compared with \$8,497 for 1966. The difference is represented by: (1) a deferred meter repair program; (2) transmission and distribution system repairs not heretofore sustained; and (3) rewinding of pump motors. For ratemaking purposes, the staff has spread these nonrecurring amounts over an appropriate number of years. In addition, the staff has reflected the effect of normalizing abnormal amounts to be expended for known well and pump maintenance during 1968.
- e. Printing, Addressing and Postage of Customer Bills - The difference between applicant's and the staff's estimates results from the staff's inclusion of a 20 percent increase in postage rates to be effective in 1968, a fact unknown to applicant during preparation of its estimate.
- f. Transportation, Vehicle Operation and Outside Maintenance - The staff's estimate is based upon costs as adjusted by the financial examiner rather than those reported by the company for 1967.

- g. Legal and Accounting Services - Legal and accounting costs were incurred in 1967 for a special job of a nonrecurring nature. Applicant's 1968 estimate for this item disregards the special nature of a portion of total legal and accounting services in 1967 by factoring the recorded amount upward. The staff normalized the nonrecurrent portion of these costs over a five-year period.
- h. Insurance, Pensions and Employee Benefits - The year 1967 recorded includes only a partial year's costs for a newly instituted employee health insurance plan effective July 1, 1967. Both applicant's and the staff's 1968 estimates include such new costs for the full year but the staff's estimate reflects pension benefit increases (a percentage of payroll) reflecting the staff's payroll estimate.
- i. Outside Engineering and Consulting Fees - A portion of these costs in 1967 was incurred for the special project referred to in item g, above, and applicant and staff estimates were treated in a manner explained therein.
- j. Uncollectibles - The staff estimate reflects historical experience of applicant with this cost, whereas applicant rounded the 1967 recorded amount. Also, applicant estimates this cost to be directly related to gross revenues (therefore a different amount at proposed rates) while the staff estimate reflects its experience with uncollectibles sustained by many similar water utilities.
- k. Rate Case Expense - Applicant has spread its estimated cost of the current rate proceeding over three years, while the staff has normalized such cost over five years, consistent with applicant's average interval between rate proceedings.
- l. Miscellaneous Expenses - Office machine servicing, office utilities and janitorial services were estimated conjunctively by applicant and hence cannot be compared, in detail, with the staff's separate estimates. The staff's total of these items is \$1,100 less than applicant's estimate and results from an analysis of each separate cost item.

TYPICAL DATA REQUEST

1. A monthly tabulation of number of customers, quantities of water sold and revenues billed, by class of customer, for the last three calendar years and present year to date.
2. A monthly tabulation, for the same period as indicated in item 1, showing for each well, booster pump or other production unit (if combined), water produced or pumped, kWh consumption, billing demand, dollars billed and power utility schedule number. If several units are combined in one installation, include all horsepower ratings, kWh consumed and designed capacities of each unit. If billing horsepower of any installation is other than total combined load, so indicate, together with any limitations and/or possible combinations of horsepower, production and discharge heads. If pumps are other than electric, include data similar to above for fuel used.
3. For the same period covered in item 1, a separation of Ac. 704, Water Purchased, by each source and/or location of delivery point and include unit prices paid. In a similar manner, separate Ac. 744, Chemicals Purchased, by types and quantities of the various chemicals used in water treatment, together with prices paid.
4. Monthly operation and maintenance expenses for the period outlined in item 1 by major functional classifications or accounts and (for other than major utilities) monthly details, for the same period, for accounts or sub-accounts of administrative, general and miscellaneous expenses.
5. The recorded utility payroll accounts, by months, for the same three-year period and subsequent months, with portion of payroll charged to expense, to capital and to the various clearing accounts. The tabulation should also have the total monthly payroll expenditures. Show employee benefits and payroll taxes separately.
6. A listing of all utility officers, directors, and employees by months, for the same period, with position title or classification, the wage and salary

level paid at the beginning of each year, increase during that year, the amount paid at the close of the year and the total amount paid each employee during the year.

7. Itemized cost and description of nonrecurring or unusual expense items in the period outlined in item 1. Indicate any other pertinent data which will be of assistance in adjusting the recorded expenses to reflect normal expected operating conditions.

8. Summarization of annual total net uncollectible water bills actually experienced during the last three calendar years and current year, to date.

9. Latest detailed map of the system.

Dated May 2002

MASTER DATA REQUEST

I. FIELD REVIEW

Provide a 1-day field review for each district in the rate case and the general office. From 6 to 10 staff members should be expected for each district review and 1 to 2 for the general office review. The field reviews should be scheduled prior to day 30 of the rate case plan.

A. The district field review should include the following:

1. District headquarters review, including:
 - a. Description of headquarters operations.
 - b. Billing procedures.
 - c. Inspection of the physical property at the headquarters.
 - d. Utility personnel
 - 1) Job description and duties.
 - 2) Interview of employees
 - e. Review of utility's complaint log.
 - f. Review of utility records upon request from staff (staff will inform utility beforehand).
2. Tour of the water system, including:
 - a. Orientation describing system before starting the tour.
 - b. Tour of the system should include the following:
 - 1) Areas of customer growth.
 - 2) Plant that is to be renovated or replaced over the next three years.

- 3) Plant that has been installed or constructed since the last rate case.
- 4) Sites where major construction is to take place over the next three years.
- 5) Major plant facilities (dams, reservoirs, treatment plants, wells, etc.).
- 6) Current maintenance or construction work going on at the time.
- 7) Warehouse and storage facilities.
- 8) Testing facilities if applicable.
- 9) Specific areas of the system predesignated by the staff.

B. The general office review should include:

1. A tour of the general office describing its operations including:
 - a. Functions of each section of the general office.
 - b. Responsibilities and duties of personnel in each section of the general office.
2. An inspection of physical property at the general office.
3. Review of utility records upon request of the staff (staff will inform utility beforehand).

II. RATE BASE

A. PLANT

Provide the following for each District and the General Office:

1. Recorded vs. Authorized Utility Plant additions for the last two GRCs, itemized by dollars and projects.
2. Recorded Depreciation and Amortization Reserve for the last 6 years broken down into end of year balances by individual plant depreciation reserve accounts.
3. A detailed description of the construction budgeting and approval process.

4. Copy of the most current approved six-year construction budget which includes a narrative explaining the budget expenditures. Also provide actual amounts constructed for these six years.
5. Provide authorized test year and actual expenses by year for plant for the last six years.
6. Maps for each district showing capital additions for the last six years and those budgeted for the next three years.
7. Calculation of overhead loading for the construction projects, include a description of each type of loading as well as all assumptions used in the calculations.
8. Calculation of contingency for the construction projects.
9. For major projects in excess of \$100,000 (wells, water mains reservoirs, treatment facilities, etc.) provide a copy of each work order with latest estimated completion dates, including a justification of the need for each project, a detailed cost breakdown (supported by appropriate calculations), and justification of the cost, together with all relevant studies such as project alternatives and cost benefit analyses.
10. For construction projects that expect to save O&M expenses, the calculation of all savings should be shown. Also reference the savings to the appropriate O&M account(s) and workpaper page numbers.
11. All assumptions and data used in developing blanket construction budgets, together with a six-year history of expenditures for each blanket.
12. Describe the basis for each on-going plant replacement program, such as main replacement, meter replacement, vehicle replacement, etc.
13. The last six years of recorded information on utility property as follows:
 - a. All "plant held for future use" indicating the following for each property:
 - 1) Date of purchase.
 - 2) Purchase price.
 - 3) Actual in service date or intended use, and time table for such use.
 - b. All property reclassified from operating to non- operating (non-utility plant) status indicating:
 - 1) Date of reclassification.

- 2) Book value of property at time of reclassification.
 - 3) Assessed value of property at time of reclassification.
 - 4) Provide copies of property taxes paid on this property for the last six years.
- c. All property in non-operating (non-utility plant) status (having previously been in rate base) that has been sold, indicating:
- 1) Date of sale.
 - 2) Sale price.
 - 3) Book value of the property at time of sale.
 - 4) Date property was reclassified to non-operational status.
14. Specific in-service dates for each plant addition for which interest during construction (IDC) was booked in Utility plant.
15. Provide recorded interest during construction booked in utility plant in service for the last two GRCs and for the forecasted test years by project.

B. ADVANCES AND CONTRIBUTIONS

Provide the following information for each district and the general office:

1. Recorded monthly debits, credits, and balances for advances and contributions for the last six years.
2. All assumptions and calculations which were used to estimate advances and contributions in the test years. (If trending was used, explain the method and show the statistical significance).
3. Provide staff with advances and contributions information on a 3-1/2" HD diskette using EXCEL 7.10 spreadsheets using an IBM or compatible PC, together with hard copies of information.

C. MATERIAL AND SUPPLY (M&S)

Provide the following information for each district and the general office:

1. Recorded monthly debits, credits, and balances for materials and supply for the last five years.
2. A list of M&S that has been in the M&S account more than three years.
3. Average turn over rate of M&S over the last five years.
4. A breakdown of specific items (and dollars) associated with each new project.
5. A statement of the company's inventory policy, outlining the length of time items should ideally remain in M&S.

D. WORKING CASH ALLOWANCE

Provide the following information for each district:

1. A detailed explanation of the estimate of each element of the operational cash, together with supporting workpapers.

- a. Funds supplied by the stockholder:

- 1) Special deposits
- 2) Working funds
- 3) Notes receivable
- 4) Prepayments
- 5) Deferred debits

- b. Funds supplied by the ratepayer:

- 1) Customers' deposits
- 2) Insurance reserves
- 3) Deferred credits
- 4) Accrued vacation and sick leave
- 5) Amounts withheld from employees

6) Taxes accrued

7) Accounts payable

2. A description of how the expense lead-lag days were derived, showing which expenses (providing workpaper references) are included in each lead-lag expense estimate, and including all assumptions and calculations.

3. A description of how the revenue lead-lag days were derived, including all assumptions and calculations.

III. SALES AND REVENUE

1. Provide, on a diskette, as well as hard copy, for the last three year (i.e..GRC test years test year 2 and attrition year) recorded and authorized data in column format, compatible with EXCEL 7.10, the following information for each district:

a. Number of Customers by class: metered, flat, and total.

b. Sales (Ccf) by class of customer: metered, flat, and total.

c. Revenues by class of customer: metered, flat, and total.

d. Sales per customer (Ccf/cust.) by class of customer: metered, flat and total.

2. Fully explain method used to estimate sales in the test years for each district. Provide a copy of all program(s) used to derive estimates.

a. List the independent variables used in the econometric equation.

b. List the coefficients for each of the variables.

c. Fully explain how the coefficients were derived. Also, explain all the assumptions and rationale for using the assumptions.

3. Fully explain how customer growth is estimated in the test years for each district.

4. Provide the following information regarding property development which is currently under way or proposed during the tests years within each district:

a. Type of development (residential, commercial, industrial, agricultural, etc.).

b. Number and class of new customers expected in each development including, where new customers will come on line.

5. Provide a copy of the utility's policy on conservation.
6. Indicate the status of the following in each district.
 - a. Voluntary conservation
 - b. Mandatory conservation
 - c. Rationing
7. Explain how the items in question 6 are expected to affect sales in the test year. Additionally, provide a detailed breakdown by percentage and amount of unaccounted for water for the last six years. Explain all unusual (abnormal) amounts.

IV. OPERATION AND MAINTENANCE EXPENSES

A. ORGANIZATION, POLICIES AND PERSONNEL

Provide the following information for each district and/or the general office, if applicable:

1. An operation and maintenance organizational chart describing responsibilities and duties for each position. Indicate changes in the organization during the test years with full explanation and justification.
2. Utility maintenance and service policies and programs on all utility facilities and equipment.
3. The recorded number of operation and maintenance employees as of January for each of the last six recorded years, including a table delineating allocated man-days, labor dollar amounts, overhead dollar amounts, material amounts, and total costs. Additionally, provide the same information for the first and second test years.

B. SOURCE OF SUPPLY EXPENSES

1. Recorded quantities and percentages of all sources of water (Ccf) used by the utility in the last two GRC's by year, and source. The source breakdown should be as follows:
 - a. Purchased water - Identify each seller and the quantity of water purchased, together with a copy of each seller's current rate schedule(s).
 - b. Wells - Indicate water produced from each well. Additionally, list all well in service during the last six years and all wells anticipated to be in service during the first and second test year. Also, provide pumping capacities and recorded annual

water production for the wells in service for the last six years and the first and second test years.

- c. Springs and Horizontal Wells - Indicate water produced from each source for the last 10 years.
- d. Surface water - Indicate amount of water produced at each intake point for the last 10 years. Surface water sources include rivers (streams, brooks), lakes (ponds), collecting and impounding reservoirs.

- 2. If the percentage of water used from each source (mix) has changed over the last two GRC's by year, explain in detail. Also indicate if further changes in the mix are to take place in the test years with full explanation as to why.
- 3. Recorded labor, non-labor and other operation and maintenance expenses for the past six years, indicating where any unusual non-recurring expenses.
- 4. Breakdown of expenses included in any general source of supply, such as "miscellaneous", "other", etc.
- 5. Detailed explanation of how each expense item in 39 and 40 is estimated in the test year. If trending is used, explain method and show statistical significance.

C. PUMPING EXPENSES

- 1. Recorded power consumption for the last six years for each pump in the water system, identifying each pump by location, size (hp), type and use (well, booster, etc.).
- 2. A copy of each power bill for the last 12 months.
- 3. A copy of most recent tests for each pump larger than 7.5 horsepower.
- 4. A description of all operational changes that have taken place since the last GRC that had an effect on power consumption.
- 5. A description of all operational changes expected in the test years that will effect power consumption.
- 6. A detailed explanation of how pumping power consumption is estimated in the test years.
- 7. Recorded labor, non-labor and other pumping expenses for the past six years, showing separately each unusual or non-recurring expense.

8. Breakdown of expenses included in general pumping expense categories, such as "miscellaneous", "other", etc.

9. Detailed explanation of how each item in 7 and 8, is estimated in the test years, explaining method and showing statistical significance of any trending used.

D. WATER TREATMENT EXPENSES

1. Explanation of water treatment required in system. Insure that the following information is included:

- a. Location of each treatment facility
- b. Contaminant(s) (source if known)
- c. Treatment required

2. Complete list of water testing required by the State Department of Health Services and the cost of each test.

3. Recorded labor, non-labor and other water treatment expenses for the past six years, showing separately each unusual or non-recurring expense.

4. Breakdown of expenses included in general water treatment expense categories such as "miscellaneous", "other", etc.

5. Detailed explanation of how each item in 53 and 54, is estimated in the test year, explaining method and showing statical significance of any trending used.

E. TRANSMISSION AND DISTRIBUTION EXPENSES

1. Number of leaks occurring in the system each year for the last six years, together with a map showing location and date of each leak and main replacement.

2. Main flushing program, including the amount of water used.

3. Recorded labor, non-labor and other transmission and distribution expenses of the past six years, separately showing all unusual and non-recurring expenses are to be shown separately.

4. Breakdown of expenses included in general transmission and distribution expense categories such as "miscellaneous", "other", etc.

5. Detailed explanation of how each item in 58 and 59 is estimated in the test years, explaining method and showing statistical significance of trending used.

F. CUSTOMER ACCOUNT EXPENSES

1. Billing procedure from meter reading to receipt of payment.
2. Procedures for responding to customer complaints, together with a tabulation of customer complaints received since the last GRC.
3. Recorded labor, non-labor and other customer account expenses of the past six years. One-time or unusual non-recurring expenses are to be shown separately.
4. Recorded uncollectible rates for each customer class per year for the last six years, explaining basis for uncollectible estimates in the test years.
5. Breakdown of expenses of general customer account expense categories such as "miscellaneous", "other", etc.
6. Detailed explanation of how each item in 63, 64 and 65 above, is estimated in the test years. If trending is used, explain the method and show statistical significance.

G. SALES EXPENSE

1. Recorded labor, non-labor and other sales expenses of the past six years. One-time or unusual non-recurring expenses are to be shown separately.
2. Breakdown of expenses of general sales expense category such as "miscellaneous", "other", etc.
3. Detailed explanation of how each item in 67 and 68 above, is estimated in the test years. If trending is used, explain the method and show statistical significance.

H. ADMINISTRATIVE AND GENERAL EXPENSES (Excluding Pensions and Benefits)

Provide the following information for each district and/or the general office if applicable:

1. Detail narrative of how the company forecasts its A&G expenses for test years one and two.

2. Current organizational chart showing name, title of all employees in the GO, regional office, and affected districts. Explain all changes from last GRC.
3. The compensation (salaries, bonuses, and other consideration for services) for each employee identified in item 71 for the last 2 years of recorded data. Additionally, provide this same information on a forecasted basis for the GRC test years 1 and 2.
4. The effective date and major provisions of each wage negotiation with represented employees.
5. A table showing employees authorized in the latest two GRC and those actually hired.
6. A copy of all rental agreements, including square footage, number of employees, and corporate department identification.
7. Provide copies of all leases, and a listing of the following:
 - a. termination date
 - b. building square footage
 - c. annual base rent and rent escalation rate
 - d. cost per square foot
 - e. operating costs
 - f. operating cost as a percentage of base rent
 - g. number of management and non-management personnel at each lease site
 - h. vacancy rates of rental properties
 - i. commercial vacancy rates of major markets in which the company rents property.
 - j. space utilization per employee
9. For all new leases, provide all studies that support rental space acquisitions.
10. What is the current overall company useable square footage/person standard for the company, both actual and targeted for the projected years.
11. Information on all renegotiated leases at lower rates, if applicable.

12. Identify which leases set to expire in the test period which will not be renewed, specifying whether offices in these locations will be relocated or eliminated.
13. Provide information on what type of computer hardware used by the company (mainframes, minis, and microcomputers, disk storage, etc...).
14. Indicate upcoming replacements and/or expansion of computer system. Include salvage value for "obsolete" hardware. Indicate where in the workpapers this revenue is reflected.
15. Current and historical (last 6 years) information on the number of PC's-to-total workforce (and percentage) and number of PC's-to-professional workforce (and percentage), indicating primary uses for the PC's as a percentage of total PC users and as a percentage of professional PC users.
16. A six-year history of office supplies and other expenses. Any supplies which the utility believes were purchased as a result of increased activity should be specifically justified by activity. This includes all supplies and other expenses incurred in connection with the general administration of the utility's operations which are assignable to specific administrative or general departments and are not specifically provided for in other accounts. These accounts may be subdivided into the following:
 - a. Automobile service, including company policy for replacing vehicles. Also, provide number and type of vehicles used.
 - b. Books, periodicals, bulletins, and subscriptions.
 - c. Building service expenses (not including rent) for customer accounts, sales and A&G.
 - d. Cost of individual items of office equipment used by general departments which are of small value or short life.
 - e. Office supplies and expenses.
 - f. Postage, printing and stationery.
 - g. Transportation, meals, and incidental expenses.
 - h. Utility services.
17. A complete explanation of major accounting changes that have occurred since the last GRC which affect the level of expenditures in any of the A&G accounts, documenting where the expense had been billed in the past, where it is currently being billed, and the level of overall expenditure in the subaccount over time. The utility should

also inform the staff witness which utility witness is responsible for the expenses that have been transferred into or out of specific A&G accounts.

18. The most recent copy of all property, and injuries and damages insurance coverages. Include the amount of coverage for each class of insurance carried, the property the policy covers, and all applicable premiums.

19. Data on losses relating to crime, machinery, general liability, and workman's compensation.

20. A discussion of claims investigation policies and settlement history. Regarding the latter, provide data on trends in the number of claims filed, size of the claims, major categories of claims and the percentage of those who file claims against the utility that ultimately collect from the utility.

21. A discussion of alternative risk financing techniques that the utility has explored as a means of controlling the cost of insurance coverage.

22. Franchise fees paid to each municipality, and gross revenues for that municipality for the past six years.

23. Information on significant new incorporations of local cities in its service territory and data on the financial impact of these corporations.

24. Information on all major changes in federal and/or state legislation or regulations which it believes will have a significant effect on the level of A&G expenses in the test year. The Company should summarize the key provisions of the legislation or regulation and provide details on when the measure was passed and became effective. A list of all regulatory Commission expenses identified with actual proceeding numbers, and the nature of the proceeding.

25. Data on all major rate and other proceedings the utility has pending or anticipates will be filed. List as follows:

- a. Salaries, fees, retainers and expenses of all those involved in the prosecution of, or defense against petitions or complaints presented to regulatory bodies or anything connected with such cases.
- b. Expenses, such as supplies, payments to public service or other regulatory commissions, expenses for correspondence and travel, and other expenses directly incurred in connection with formal cases before the Commission.

26. For the most recent year applicable, a list of all dues and donations the company expects to pay, the names of the organizations, and descriptions of the organizations'

activities. Also describe why the company is a member of said organization OR why the company is making a contribution to this organization.

27. All consultants that the utility hired to assist it in monitoring or commenting on pending legislation or regulations for the applicable period. Where information could be obtained through the use of utility personnel the decision to use outside consulting services shall be fully justified. Identifying the department for which the consultants were utilized.

28. A list of each other outside services employed for the applicable period, including fees and the purpose for using the service. Identify the corporate department which utilized the service.

29. All other information pertaining to miscellaneous general expenses, as referred to in Account 799.

30. Provide a representation letter on all pending lawsuits/litigation in your service area.

V. DEPRECIATION

Regardless of proposed changes in the remaining life, provide the following:

1. Provide studies supporting:
 - a. Average Service Lives for like kinds of properties and sub-groups of same kinds of properties.
 - b. Net Salvage Rates
 - c. Survival Curve Studies
 - d. Gross Salvage and Cost of Removal Values
2. If Quantified Additional Uncertainty (QAU) is used:
 - a. The dollar impact on depreciation expense of QAU
 - b. Accounts in which QAU is applied

VI. TAXES

All responses should be for 6 years, the base year and the two test years, unless specifically stated otherwise. The recorded years are for the 6 most

recent closed years where complete data can be derived. The base year is the year prior to the test years of the case and the one that determines estimates for the test years. The test years are defined as the first two years in which the company is seeking rate increases.

1. Total Tax Depreciation

- a) Federal
- b) State

2. Interest Deductions

- a) Federal
- b) State

Show the exact interest calculation. The calculation should be based on the product of weighted cost of debt times weighted average net rate base for interest. The weighted average net rate base for interest equals total average annual rate base less working cash less deferred ITC.

3. Estimates of cost of removal and percentage repair allowance. This item only needs to be supplied for the base and test years.

- a) Federal- 1980 and Prior Plant
- b) State – all vintage years

4. All other test year deductions allowed under TRA 86.

- a) Federal
- b) State

5. All charitable contributions and other tax items allowed as tax deductions, but not allowed for ratemaking purposes. This item pertains to the 6 recorded years.

6. FIT deferred tax items and credits for the applicable years such as:

- a) Average deferred taxes related to depreciation which are deducted from rate base.
- b) ITC
 - i) Option 1 companies – the average annual ITC to be deducted from rate base.

- ii) Option 2 companies – the state deduction applicable to the interest calculation and the normalized portion of ITC that applies as a reduction to the cost of service.

7. FIT tax depreciation for ratemaking purposes detailed by class of tax depreciable asset:

- a) ADR/DDB through 1980
- b) Straight-line book depreciation on post 1980 plant

8. Estimates of the following deferred tax items:

- a) End of Base Year deferred tax balance based on plant.
- b) Annual deferred taxes generated by base year and prior plant for the test years and attrition years.
- c) ITC deduction generated on prio to test year plant.
- d) Total unamortized average deferred ITC to deduct for base year and prior plant which has not been ratably flowed through the test year and attrition years.

9. For both Federal and State taxes, the book to tax fa ctors used to reduce/increase the book basis plant additions to tax basis plant additions, if this method id used. Otherwise describe exactly the procedure used to develop tax basis additions. This information needs to be provided for the base year, test years and attrition years.

10. Provide the State tax depreciation rates used to calculate State tax depreciation, by class of plant. Rates should be based on Federal ADR/DDB mid-range classes.

11. Provide the State tax depreciation on base year and prior plant for the base year and prior plant, test years and attrition years.

12. Provide the plant life used for book purposes, in the deferred tax calculation, by class of plant.

13. PAYROLL AND PROPERTY TAXES

- a) Provide a full description used in projecting payroll and property taxes in the base, test and attrition years.
- b) Provide a detailed explanation of the capitalized portion of these taxes allowed as a credit or deduction of tax purposes.
- c) Provide a detailed showing of the derivation of the annual adjustment deduction for Federal and State purposes.

VII. PENSIONS AND BENEFITS

1. All calculations and workpapers compiled by company supporting account No. 795. Each subaccount must be identified by proper title (i.e. ESOP, pensions, group life insurance, AD&D, etc...). Cross references must be easily followed and thoroughly explained. Materials should be succinct and orderly so that supplemental and summary information is not interspersed with calculations and source materials.
2. Provide complete copies of company Actuarial Reports of the last two most recent reports for Pensions, Post-Retirement Benefits Other than Pensions, and Medical.
3. Complete copies of all actuarial reports for pensions, supplemental retirement plan, life insurance, etc.
4. Complete copies of all of the most recent employee pensions and benefits compensation studies/surveys in the Company's possession.
5. For the pension plan, provide the following:
 - a. Actual, annual contributions to the trust for each of the last six years.
 - b. Actual, annual rate of return on pension assets for each of the last six years.
 - c. The ERISA/IRS interest rate assumption for each of the last six years.
6. Provide the six most recent years of recorded data for the following items:
 - a. Net Company Contributions: the company's annual total cash expenditures net of any unusual refunds, dividends or charges. If there were any unusual refunds or charges, please describe them and list the amounts.
 - b. Employee Contributions: employee's total annual out-of-pocket expenditures excluding flexdollar allocations.
 - c. Participating Employees: annual average number of participants. The respondent must also indicate if any plans or providers cover only certain types of employees (i.e. non-management/management, hourly/salaried, exempt/non-exempt, and retirees).
 - d. Surplus/Deficit: Whenever appropriate, the total, annual expensed claims less total employer plus employee contributions.
 - e. Medical Care: Provide the data requested above (items a through d) for each and every plan (i.e. indemnity, HMO). Contributions must be identified by plan/provider and premium type.

- f. Employee Investment and Savings Plans: Provide the data requested above (items a through d) for each plan.
 - g. Life Insurance: provide the data requested above (items a through d) for each plan.
 - h. AD&D Insurance: Provide the data requested above (items a through d) for each plan.
7. A reconciliation between the recorded base year expenses by subaccount/functional code and the amount listed in Account No. 795 for the base year.
 8. A summary of all plan design, administrative, and accounting changes for each benefit for the last six years.
 9. A copy of Employee Handbooks for all categories of employees, covering each and every benefit plan.
 10. Bargaining Cycles—Provide all changes in benefits for unionized and union employee for the last two bargaining sessions and the next bargaining session/changes. This information should include the date and detailed description of changes and precisely which employee group(s) are/will be affected.
 11. Provide for last six years, a comparison of budgeted to actual expenses for pensions and all other benefits.
 12. Provide complete copies of Trust Agreements for Post-retirement Benefits Other than Pensions.

VIII. COST OF CAPITAL

Provide the following regarding:

1. Long-Term Debt:
 - a. The sinking fund balances for each issue, both existing and proposed, by year for the test and attrition years
 - b. The retirements by year and by issue for the test and attrition years.
 - c. The formula used to determine the cost of new issues of long-term debt (example: 30-year Treasury Bond + 100 basis points), as well as the reason for using the particular rate and basis point premium.
 - i. What Standard & Poor's rating is this meant to approximate, if any?

- ii. Why was this particular rating chosen?
2. Provide the following for the historical rate of return:
 - a. The Pretax Earned Rate of Return adjusted and unadjusted for normalized water and sales, as well as all other unusual events, for the past 10 years, by year. Please include the calculations as well as references to all source documents. For each year, please note and describe if unusual weather, sales, or other event occurred, and what was the basis point effect was on the return.
 - b. The Pretax Authorized Rate of Return for the past 10 years, by year. Please include the calculations as well as references to all source documents. What is the Net to Gross multiplier you used each year and why?
 - c. For those years in which the company under-earned its authorized rate of return, please provide all reasons why this occurred.
3. Provide the following for the historical return on equity:
 - a. The Pretax Earned Return on Equity adjusted and unadjusted for normalized water and sales, as well as all other unusual events, for the pasted 10 years, by year. Please include the calculations as well as references to all source documents.
 - b. The Pretax Authorized Return on Equity for the past 10 years, by year. Please include the calculations as well as references to all source documents.
 - i. What is the Net to Gross multiplier you would use and why?
 - c. For those years in which the company under-earned its authorized return on equity, please provide all reasons why this occurred.
4. Provide total company average California regulated rate base by year for the last 10 years.
5. Are your stocks, bonds, or company as a whole rated or commented on by any organization or agency?
 - a. If so, please provide name(s) and phone numbers(s) of rating/commenting organization(s), the ratings/comments you have received, by year, for the past 10 years, and copies of the published reports that address your company.
6. Provide a table with the following data by year for the past 10 years:
 - a. Net Income Before Interest Expense and Income Taxes.

- b. Interest Expense.
 - c. Income Taxes.
 - d. Total Debt at Beginning of Year.
 - e. Total Debt at End of Year.
 - f. Total Capital at the beginning and end of year.
 - g. Funds Generated from Operations before Interest Expense and Taxes.
 - h. Net Cash Flow from Operations.
 - i. Capital Expenditures by Year.
7. Provide your dividend payout ratio by year for the past 10 years.
8. Provide the average number of residential customers by year for the last 10 years.
9. Provide a Summary of Earnings table comparing authorized and recorded values for all categories for each of the previous two test years.